



NOVEL GLUCOSE TRANSPORTER/SENSOR PROTEIN AND USES THEREOF

Abstract of the Disclosure

The present invention provides a purified and isolated nucleic acid encoding a
5 GLUTx glucose transporter/receptor/sensor protein. The present invention also
provides a vector comprising nucleic acid encoding GLUTx, a host cell transformed
with the vector, and a method for producing recombinant GLUTx protein. In
addition, the present invention also provides a purified GLUTx protein. Also
provided by the present invention are nucleic acid probes and mixtures thereof
10 specific for GLUTx nucleic acid and antibodies immunoreactive with GLUTx. The
present invention also provides a methods for screening for agents which bind to the
GLUTx protein and the nucleic acid encoding the GLUTx. Also provided is a method
of promoting euglycemic homeostasis in a subject comprising introducing nucleic
acid encoding GLUTx to the subject so that GLUTx is expressed in an amount
15 effective to promote euglycemic homeostasis in a subject. Finally, the present
invention provides a non-human, transgenic model for GLUTx expression.